

CALIFORNIA STATE BOARD OF HEALTH

MONTHLY BULLETIN

Vol. 7	*MARCH-APRIL, 1912	Nos. 9, 10.
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*As announced in the January (1912) Bulletin, this number is designated "March-April" in order to make the month of issue coincide with the current calendar month. Necessarily the reports must be for the preceding months.

Published the tenth day of every month at the office of the Board, Sacramento.
Entered as second class matter, August 15, 1905, at the post office at Sacramento,
California, under the Act of Congress of July 16, 1894.

FRIEND WM. RICHARDSON - - - SUPERINTENDENT OF STATE PRINTING

THE CALIFORNIA STATE BOARD OF HEALTH

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REGULAR MEETINGS

The meetings of the California State Board of Health are held regularly the first Saturday of each month, but the quarterly meetings required by law to be held at the Capitol of the State are ordinarily designated as January, April, July, and October.

By courtesy of the University of California the Food and Drug Laboratory and the Hygienic Laboratory are located in University buildings at Berkeley, California.

Address all general communications to the

SECRETARY, Sacramento, California.

MARCH-APRIL BULLETIN.

COMMENTS.

Clean-Up Days.

Now is the time for "clean-up days" to begin once more. In nearly all the famous campaigns against disease, clean-up orders have played their part. In recent years the cleaning up of New Orleans and the Panama canal to stop yellow fever; the cleaning up of San Francisco to stop bubonic plague; the cleaning up of the Philippines to stop cholera; the cleaning up of Havana to stop many diseases, are all illustrations of this fact. Scientists know that disease is materially reduced by such campaigns, not because the filth itself produces disease, but because it favors the life of insects and rodents which do harbor disease and serve as its transfer agents. The fly, the roaches, the bedbug, the flea, the mosquito, the rat, these and others of our common insect and animal associates, that divide their time between living in our alleys and nibbling our foods and ourselves, have been discovered by disease parasites to be a means of attacking us. So, like the Greeks of old who concealed themselves in the wooden horse in order to gain entrance to Troy, these parasites conceal themselves in the bodies of the insects and rodents which we permit to enter our houses. A single clean-up day, by destroying the breeding and hiding places of these animal and insect harbingers of disease, interferes seriously with this beautiful scheme. When clean-up days become the frequent and regular thing, and are followed by extensions of the crusade to the dairies and other sources of the food supply of a whole city, our germ-enemies are practically forced to abandon this method of attack.

This explains how it is that clean-up days are advocated by the medical profession and health officers, even though they tell the people in the same breath that filth and rubbish are not in themselves the cause of disease. It is unfortunate that many good people, who make some claim to the right to speak authoritatively have learned only half the lesson of science in this matter. These persons have observed that a clean-up policy carried out for any length of time by a city is followed by a lowered death rate from communicable disease. It seems to them, therefore, that it only remains to write—Q. E. D.: "Filth causes disease and the germ theory is a myth." This error in deduction would do little harm were it not for the fact that it leads to opposition to many other methods of fighting disease "germs," which are even more important than the clean-up method.

The Governor has set Thursday, April 18th, as a general clean-up day to be observed throughout the State, and the newspapers of the State are very generally advocating the observance of the day not only as a measure of protection against fire but as a sanitary measure calculated to make for better health conditions. Clean-up days repeated with sufficient frequency constitute one great line of defense in our battles against disease. It is to be hoped that the efforts of the Gov-

ernor, the various organizations interested, and the newspapers will result in a very active house (and yard) cleaning on April 18th.*

It will be remembered that San Francisco began one of the greatest sanitary battles of modern history with her great fire of April 18th, 1906. It is fitting that the Governor should name this date as "Clean-up day," and that the entire State should follow the splendid example of the great city by the Golden Gate.

* * * * *

A Battleship a Year for a Pacific Squadron.

The December Bulletin contained a résumé of some facts and figures collected by the Tuberculosis Commission. These figures might be restated in this way: If California were to apply the same active business methods to the eradication of tuberculosis that is being applied to the financing and building of the Panama-Pacific Exposition, more than enough money and lives could be saved to build, maintain, and man one new class A battleship each year; and this without taking a single man now at work from his employment or adding permanently one dollar of increased taxation. At least all those who believe in a strong navy and a Pacific fleet should be willing to investigate this statement thoroughly, and if it is true, they should be willing to become active health conservationists.

It happens that the same month in which the California State Board published figures on the cost of tuberculosis to the State, the Missouri State Board likewise published figures. A comparison of these two estimates shows that the California estimate of a net loss of \$15,000,000 per year is very conservative.

* * * * *

Good Form Versus Good Sense.

There is sometimes a vast difference between good form and good sense. For example, a mother will provide her children with individual table utensils and chide them if they drink out of each other's glasses. It is true the Chinese and Igorrotes do it, but this only emphasizes the fact that a careful American mother should not permit her children to so transgress the social customs. That the care which she exercises, however, is due to considerations of good form rather than to good sense is proved when one follows this mother and her children down town and finds her calmly giving each of them a drink from the common cup chained to the public fountain.

This is but one of hundreds of illustrations that will occur to any one who spends a few moments thinking over how many things we all do because it is "good form" to do them and not because of any studied

*As this bulletin is leaving the press the following extracts from newspaper references to clean-up days which are in progress, give emphasis to the topic. General clean-up days announced and advocated for Fresno, Lemoore, Ocean Park, Oroville, Claremont has passed a special ordinance to prevent the dumping of rubbish in streets and alleys. Lodi has planned an active campaign. The city has been laid out in districts with executives in charge. The schools are to be dismissed to permit the children to work. The women's clubs are actively coöperating, and mass meetings have been held to perfect the plans. Los Angeles will keep 270 men and 135 teams at work for two months on special cleaning of the city. San Bernardino has ordered all alleys cleaned up. Stockton has made very extensive plans for cleaning up the city and at the same time beautifying it by planting flowers and shrubbery. Venice has passed a "3-day notice" ordinance requiring all citizens to clean up their property. Thus it will be seen that clean-up day is becoming a "habit" which is extending from the individual to the municipality.

application of good sense. Those who travel will have noticed the great change good form is working in the use of the Pullman lavatories, especially since the dental basins have been installed. It is no longer an accepted custom to brush one's teeth over the wash bowl, or even to leave the bowl for one's fellow passenger without first cleaning it with a fresh towel. It has fortunately become a matter of good form to have a sleeping porch, to take a morning bath, and to be an advocate of some outdoor sport; but it is evident from observing many people that in all these matters they are following the popular customs of the day without thinking out for themselves the special reasons why these customs are beneficial.

An interesting article might be written on Individual Utensils versus The Common Lot. The list of articles from the individual tooth brush to the individual bath tub is a long one, and steadily growing longer, yet the list of things we use in common is still very long. The common drinking cup is the least necessary, and should head the list. The roller towel is next. The soda fountain glass, as served in many stores, has had only a "theoretical" cleansing. The blankets and quilts, unprotected by long sheets are essentially community property of transient roomers.

When the Governor pocketed the legislature's bills banishing the common drinking cup and the roller towel, and requiring nine-foot bed sheets, the changing of the water in public swimming baths at intervals, etc., many of his admirers decided that his progressive policies did not include health conservation. On the other hand, some have argued that this type of legislation is open to question; that the banishment of the common cup from many states has only led to irritation of the people and to their going without water between meals, instead of providing themselves with individual cups. Perhaps the Governor reasoned that instead of legislating the common cup *out*, we should have legislated the drinking fountain *in*. He may have believed that all such matters are proper subjects for local ordinances rather than for state legislation. Be this as it may, it is certain that regardless of legislative enactment the demand for individual containers for food and individual facilities for personal cleanliness has steadily increased. When the people come to have the same hesitancy about using their neighbor's towel that they now have about using his handkerchief, the roller towel will go. All legislation dealing with the personal habits and customs of the people must ordinarily be expected to become dead letter laws, unless adequate appropriations are made for their enforcement or good form sets the seal of its approval upon them.

* * * * *

Habit and Judgment. Habit and judgment are often at variance. Habit leads nine out of ten of us to walk soberly along until we reach a flight of stairs, when we begin to run up the steps at full speed. We do this repeatedly, even though we know we shall be out of breath at the top and perhaps feel our arteries thump and our heads swim for some time as a result. Judgment tells us this is hard on the heart and foolish, but habit continues to direct our pace. Just so, judgment tells us that many early deaths from heart or kidney diseases could be postponed for twenty years or prevented altogether by judicious activities, proper food and avoidance of nervous strain, but

habit holds the helm, and the public is not yet ready to enact legislation to compel citizens to avoid the penalties of these diseases by proper attention to their food, recreation, and exercise.

Legislatures in general have shown a willingness to consider for legislation all matters concerning communicable diseases, and those conditions predisposing to ill health, which are beyond the control of the individual; but as a rule have been unwilling to compel a citizen by legislation to do things which concern only his own personal health. In these matters it seems necessary to wait for habit and judgment to be developed through the channels of popular education and good example. There are many arguments in favor of this policy.

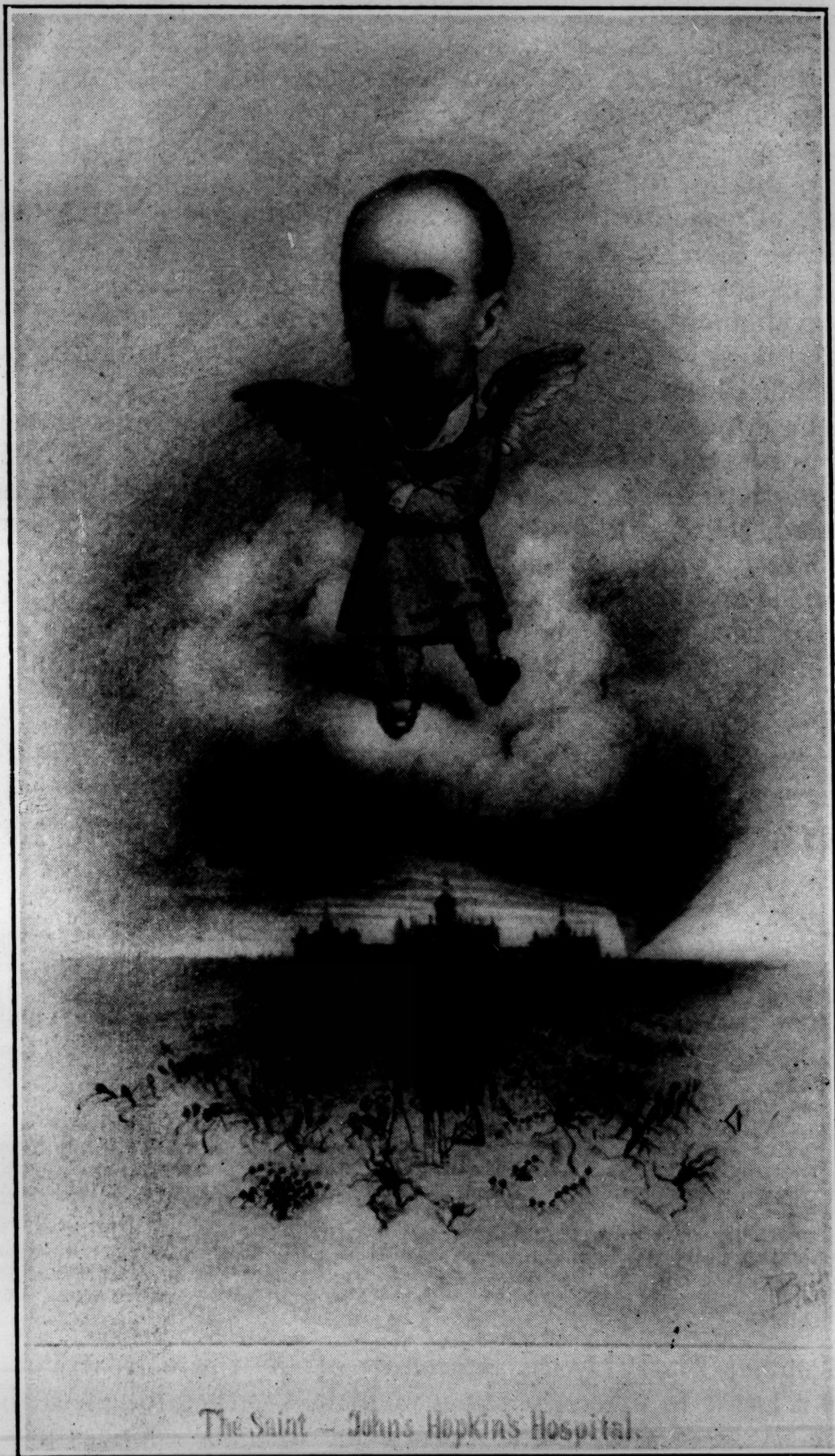
OSLERIZING DISEASE PARASITES.

When Johns Hopkins University of Baltimore, Maryland, opened its doors in the year 1875-76, American students had an opportunity for the first time to study the biological and physical sciences by the laboratory methods. When some half dozen years later the Johns Hopkins Hospital opened its doors to students of medicine, the United States began its present methods of teaching modern scientific medicine. There are now several universities that are beginning pioneer efforts to place the teaching of Preventive Medicine on a similarly secure scientific basis.

At the time the drawing on the opposite page was made Dr. Osler was devoting considerable time to aiding the Tuberculosis Associations popularize the scientific facts about consumption. Since then Dr. Osler has unwittingly become the champion of a "chloroform theory" for improving social efficiency, and the germ theory of consumption has very generally become known among the people, but both these theories have many opponents. Curiously enough in many instances those persons who construe Dr. Osler's humorous reference to chloroforming people beyond the age of forty or fifty, as a serious and dangerous doctrine, are also to be found in the ranks of those who believe in doing nothing effectively against the large number of deadly communicable diseases which are daily accomplishing more than all the "official chloroformers" that might be appointed could do if they worked continuously, including nights and Sundays.

What Dr. Osler intended to emphasize in his now famous speech was that most men and women do their best work or begin their most productive work along all lines of original human endeavor and investigation before the age of forty; that this being the case, young men and women should be given every opportunity to develop their greatest usefulness during these early years; that where older individuals are merely marking time in positions of responsibility and power, they should make way for their lieutenants, who need but opportunity to crystallize latent ability into action; that when these time-marking individuals do not voluntarily recognize the importance of thus encouraging progress and social efficiency, influence should be brought to bear to eliminate them from the ranks of obstructionists. As a figure of speech he stated that chloroform would accomplish this object. Dr. Osler's theory, expressed in a different way, has become a vital issue in the present political situations throughout the country. It has been clearly stated that "the principal difference between a Progressive and a Conservative is the difference between the ages of forty and sixty."

The newspapers of the whole United States commented on this and produced evidence to show the great value to society of men and women



The above drawing was made when Dr. William Osler was Professor of Medicine in Johns Hopkins University. It was the purpose of the student-artist to show the panic, which occurred among the disease germs, when Dr. Osler and his associates began their wonderful educational work in scientific medicine. The little round pus organisms (*staphylococci*) are shown fleeing in a body; the strands of blood-poisoning organisms (*streptococci*) are likewise seen running strung out like children playing "crack the whip." In the foreground is seen a malarial parasite with its young escaping at full speed; at the left two lockjaw germs (*tetanus bacilli*), and behind them numerous diphtheria bacilli, have given up the siege of the patients in the hospital and are making every effort to escape. Of all these fleeing armies only the group of stalwart tubercle bacilli pictured in the center of the foreground have stopped to consider their position. One of these germs may be seen sitting down during their council of war.

beyond the age of fifty, and the people read and approved. At the same time many read with unawakened interest the statements of the tuberculosis associations about the great preventable loss of life prior to the age of forty. The only explanation of this inconsistent attitude lies in the fact that the public did not (and does not to-day) fully appreciate the possibilities and scientific basis for health conservation.

The existence of these germ armies—invisible to the naked eye—were practically unknown to scientists prior to the time of the American Civil War. Consequently all persons above the age of fifty were born and received their general education before much was known about them. It is not surprising, therefore, that many able and influential citizens (even including some physicians) should be confused concerning the significance of many modern measures for the suppression of communicable disease.

When the majority of citizens understand the general scientific principles of prevention of disease as they now understand the principles upon which crops are produced or electrical machinery and automobiles are operated, there will develop a fixed policy for health conservation which will result in an efficient administration of public health departments, which can not be retarded or inhibited by any efforts of advocates of half-truth theories. It is of greater importance to get the attention of the public centered on prolonging the lives of useful citizens than to develop means of eliminating those who have passed their day of usefulness.

COMMITTEE ON STANDARD METHODS OF PUBLIC HEALTH ADMINISTRATION.

By JOHN NIVISON FORCE, M.D.
Secretary of the Committee.

EDITOR'S NOTE.—If evidence of good sense is often lacking in the common practices of the laity in matters of health preservation it is also conspicuously absent in an analysis of many of the practices of health officials. There is the greatest diversity of procedure in the several towns, cities and counties of the State in methods of quarantine, isolation, release, investigation of outbreaks of communicable diseases, ordinances for the control of milk and meat supplies, etc.

Some months ago the State Board of Health appointed a committee of fifteen—experts in health administration, laboratory, scientific, legal, and engineering work—to make a thorough study of health administration procedures in California, and to recommend a standard series of rules and regulations for the guidance of local officials.

There is probably no single thing more needed in public health administration than a code of working rules and regulations adaptable to all the varying conditions under which communicable diseases appear in cities, towns and rural districts. The State Board of Health is deeply appreciative of the thorough and earnest work being done by this committee.

On November 27, 1911, the Secretary of the State Board of Health addressed a letter to fifteen persons identified with public health activities in the State of California, requesting them to coöperate with the State Board of Health as a committee on standard rules and regulations for procedure in the administrative control of communicable diseases and model health ordinances for municipalities and counties. All of these persons accepted the call of the State Board, and the committee was organized at the State Hygienic Laboratory in Berkeley, January 17, 1912, with the following personnel:

Dr. R. G. Brodrick, San Francisco,
Health Officer of San Francisco.

Dr. F. W. Browning, Hayward (chairman of the committee),
Health Officer of Eden Township, Hayward, Alameda County.

- Dr. J. N. Force, Berkeley (secretary of the committee),
Assistant Professor of Epidemiology, University of California.
- Mr. C. G. Hyde, Berkeley,
Professor of Sanitary Engineering, University of California.
- Dr. J. W. James, Sacramento,
Member Sacramento City Board of Health.
- Mr. H. A. Mason, San Francisco,
Secretary of the League of California Municipalities.
- Dr. T. C. McCleave, Berkeley,
President of the California Association of Medical Milk Commissions.
- Dr. Gayle G. Mosley, Redlands,
Superintendent of Redlands Settlement Sanitarium.
- Dr. R. A. Peers, Colfax,
Medical Director of the Colfax School for the Tuberculous.
- Dr. E. H. Pitts, Sacramento,
Secretary Sacramento Society for Medical Improvement.
- Dr. L. M. Powers, Los Angeles,
Health Officer of Los Angeles.
- Dr. Raymond Russ, San Francisco,
Formerly with United States Public Health Service, and Special Officer State Board of Health.
- Dr. Wm. Simpson, San Jose,
Health Officer of Santa Clara County.
- Dr. G. E. Tucker, Riverside,
Health Officer of Riverside County.
- Dr. Hans Zinnser, Stanford University,
Professor of Bacteriology, Stanford University.

The subjects to be considered by the committee are grouped under three heads, for the purpose of facilitating a report on the various phases of public health administration. The entire membership of the committee is divided into five sections of three members each for report on each group of subjects. When the work on the first group has been completed, the work of the other two groups will be carried on in the same way.

Broad Lines Covered in Organization.

The titles of the divisions and sections and the membership under this arrangement are as follows:

First Division. The Administrative Control of Communicable Diseases.

- Section 1. Precautions in Visiting Patient.
Tucker, Moseley, Powers.
- Section 2. Standard Methods of Diagnosis.
Zinnser, Simpson, Brodrick.
- Section 3. Circulars of Information to Family of Patient.
Mason, McCleave, Hyde.
- Section 4. Notification, Quarantine, and Release.
Russ, Browning, Force.
- Section 5. Disinfection, and Fumigation.
Peers, James, Pitts.

Second Division. Model Health Ordinances.

- Section 6. City Ordinances.
Force, Russ, Simpson.
- Section 7. County Ordinances.
Browning, Hyde, Mason.
- Section 8. Milk.
McCleave, Brodrick, Zinnser.
- Section 9. Meat and Vegetables.
Moseley, Tucker, Powers.
- Section 10. Food and Drugs.
Pitts, Peers, James.

Third Division. Miscellaneous and Doubtful Functions of Health Officers.

- Section 11. Duties of Health Officers.
Brodrick, Browning, Force.
- Section 12. Sanitation and Plumbing.
Hyde, Zinnser, McCleave.

Section 13. Laboratory in Public Health.
Powers, Tucker, Moseley.

Section 14. Garbage.
James, Pitts, Peers.

Section 15. Inter-Department Relations.
Simpson, Mason, Russ.

The first meeting of the committee subsequent to its organization was held at the time and place selected by the State Medical Society, Del Monte, April 16, 1912. At this meeting reports were presented from all the sections comprising the first division, and these reports were referred back to the sections, with instructions to embody the recommendations into a component part of a code of public health regulations, which could be promulgated by the State Board of Health after acceptance.

Other States Set Good Examples.

The need for a set of definite working rules for this State is apparent to every person who has ever considered the subject of Public Health Administration. We have many excellent examples furnished by other states. The State of Louisiana has just one law bearing on the public health, but this gives power to the State Board of Health to prepare and promulgate a code which shall be a guide to health officers. The code is very extensive, and covers in its numerous chapters practically all phases of administrative control. New York has a manual of instructions, of handy pocket size containing model ordinances, state laws, circulars of information, and instructions to health officers. Indiana has a code of regulations which are declared to have the force and effect of law, and are bound in one volume with the health laws. The question of procedure under our present health laws, has caused much difference of opinion between health officers and physicians in the past, and many a health officer has been compelled to go against his better judgment in the enforcement of some ancient rule planted on our statute books in the days when sewer gas was deadly, and germs had the same jumping power as our justly celebrated P. Irritants.

A modern scientific code of procedure, accompanied by some specific recommendations as to state legislation would tend to harmonize the elements of the triple relation, patient, physician, and public health officer, and produce a better understanding and renewed confidence. A code such as this for California would also show to the people that every health officer was essentially a state officer and was responsible to central authority for his conduct. This would be a benefit in two ways. First of all, the health officer accused of being arbitrary, could point to his definite instructions; and second, the people would learn that behind every act of the health officer stood the power of the State. With a centralized system of public health administration the day of the politically appointed health officer would indeed be short in the land. Of course these reforms will not be accomplished in a moment, but the spirit of interest shown by the committee, speaks eloquently of the demand for its work, and it is anticipated that the progress reports which will be issued from time to time in this publication, will be read and criticised, to the end that the committee may feel that an intelligent popular sentiment is coöperating in the endeavor to give to our State a code of public health regulations.

REPORT OF BUREAU OF ADMINISTRATION FOR FEBRUARY AND MARCH.

JOHN F. LEINEN, Director.

Executive Division.

The following tables may give an idea as to the volume of correspondence and detail handled by this Bureau. During February over 2,100 letters were sent out, and during March this number rose to 3,300. During February 1,900 letters were received and in the following month 2,400. The subjects treated in this correspondence are 173 in number, and cover all phases of health administration,—executive, legislative, and educational.

Report for the Month of February, 1912.

Items.	Total.	No. of subjects.	Adminis- trative.	Morbidity.	Inter. Bureau.	Miscel- laneous.
Letters received -----	1,914	173	601	434	520	359
Letters sent -----	2,154	173	711	512	552	379
Circular letters sent -----	125	1	125	-----	-----	-----
Report blanks sent -----	1,770	8	141	1,479	150	-----
Reports received -----	1,235	15	136	856	243	-----
Press clippings, bulletins, and newspapers received ..	1,500	25	200	800	300	200
Accounts audited -----	141	-----	18	-----	123	-----
Estimates approved, items ..	144	-----	18	-----	126	-----
Checks issued -----	61	-----	15	-----	46	-----
General orders issued -----	87	3	30	-----	57	-----
Special orders issued -----	9	1	-----	-----	9	-----
Miscellaneous letters advis- ing local health officers and communities -----	112	15	42	63	7	-----

Report for the Month of March, 1912.

Letters received -----	2,405	174	825	632	456	492
Letters sent -----	3,304	174	954	842	680	828
Circular letters sent -----	1,025	5	50	-----	975	-----
Report blanks sent -----	1,960	8	155	1,650	155	-----
Reports received -----	1,421	15	155	1,040	226	-----
Press clippings, bulletins and newspapers received ..	1,720	30	320	900	318	182
Accounts audited -----	119	-----	14	-----	105	-----
Estimates approved, items ..	128	-----	14	-----	114	-----
Checks issued -----	73	-----	12	-----	61	-----
Miscellaneous letters advis- ing local health officers and communities -----	216	17	96	101	19	-----

REPORT OF BUREAU OF VITAL STATISTICS FOR FEBRUARY.

GEORGE D. LESLIE, Statistician.

State Totals and Annual Rates.—The following table shows for California as a whole the birth, death, and marriage totals for the current and preceding months in comparison with those for the corresponding months of last year, as well as the annual rates per 1,000 population represented by the totals for the current and preceding months. The rates are based on an estimated midyear population of 2,579,874 for California in 1912, the estimate having been made by the Census Bureau method with slight modifications.

Birth, Death and Marriage Totals, with Annual Rates per 1,000 Population for Current and Preceding Months for California: February.

Month.	MONTHLY TOTAL.		Annual rate per 1,000 population: 1912.
	1911.	1912.	
February:			
Births -----	3,062	2,530	15.0
Deaths -----	3,080	2,788	15.0
Marriages -----	2,184	1,785	10.7
January:			
Births -----	3,059	2,601	14.0
Deaths -----	3,216	3,192	14.7
Marriages -----	2,430	1,981	11.1

The birth, death, and marriage totals for February were much greater in 1912 than in 1911, the gain in birth registration being particularly great for February as for January also.

County Totals.—The first table on the following page shows the monthly birth, death, and marriage totals for the principal counties of the State, the list being limited to counties having a population of at least 25,000 according to the Federal Census of 1910. Totals are also shown for San Francisco and the other bay counties (Alameda, Contra Costa, Marin, and San Mateo), as well as for Los Angeles and Orange counties together.

City Totals.—The second table on the following page gives the birth and death totals for the principal freeholders' charter cities, the list including all chartered cities with a census population of at least 15,000 in 1910. Totals are given likewise for San Francisco in comparison with Oakland, Alameda, and Berkeley, the three cities adjoining one another on the east shore of San Francisco Bay, as well as for Los Angeles in comparison with neighboring chartered cities (Long Beach, Pasadena, Pomona, and Santa Monica).

Birth, Death and Marriage Totals, for Principal Counties: February.

County.	February, 1912.		
	Births.	Deaths.	Marriages.
California	3,062	3,080	2,184
Counties of more than 25,000 population (1910):			
Alameda	308	292	177
Butte	56	34	16
Contra Costa	41	36	10
Fresno	126	67	76
Humboldt	34	33	23
Kern	31	41	27
Los Angeles	822	755	517
Marin	22	11	93
Orange	71	30	80
Riverside	45	47	35
Sacramento	117	97	83
San Bernardino	51	92	49
San Diego	82	105	82
San Francisco	543	614	450
San Joaquin	45	100	36
San Mateo	31	21	32
Santa Barbara	26	26	19
Santa Clara	101	127	68
Santa Cruz	31	33	17
Solano	22	20	11
Sonoma	43	56	33
Tulare	39	28	26
Selected groups:			
San Francisco and other bay counties.....	945	974	762
Los Angeles and Orange counties.....	893	785	597

Birth and Death Totals, for Principal Cities: February.

City.	February, 1912.	
	Births.	Deaths.
Freeholders' charter cities.....	1,927	1,920
Cities of more than 15,000 population (1910):		
Alameda	31	26
Berkeley	41	38
Fresno	46	27
Long Beach	27	33
Los Angeles	584	488
Oakland	203	164
Pasadena	48	45
Riverside	26	30
Sacramento	91	84
San Diego	52	87
San Francisco	543	614
San Jose	39	43
Stockton	15	40
Selected groups:		
San Francisco	543	614
Oakland, Alameda and Berkeley.....	275	228
Total, Bay cities.....	818	842
Los Angeles	584	488
Neighboring cities	98	102
Total	682	590

Causes of Death.—The following table shows the classification of deaths in California for the current month, in comparison with the preceding month:

Deaths from Certain Principal Causes, with Proportion per 1,000 Total Deaths for Current and Preceding Month, for California: February.

Cause of death.	Deaths: February.	Proportion per 1,000.	
		February.	January.
ALL CAUSES -----	3,080	1,000.0	1,000.0
Typhoid fever -----	18	5.8	8.4
Malarial fever -----	1	0.3	2.2
Smallpox -----	1	0.3	0.3
Measles -----	16	5.2	4.0
Scarlet fever -----	4	1.3	2.5
Whooping-cough -----	9	2.9	1.9
Diphtheria and croup -----	15	4.9	4.0
Influenza -----	10	3.3	3.4
Other epidemic diseases -----	12	3.9	4.7
Tuberculosis of lungs -----	429	139.3	116.0
Tuberculosis of other organs -----	60	19.5	20.5
Cancer -----	169	54.9	56.9
Other general diseases -----	115	37.3	42.6
Meningitis -----	31	10.1	6.5
Other diseases of nervous system -----	228	74.0	81.5
Diseases of circulatory system -----	544	176.6	182.5
Pneumonia and broncho-pneumonia -----	328	106.5	123.7
Other diseases of respiratory system -----	87	28.2	28.0
Diarrhea and enteritis, under 2 years -----	55	17.9	16.2
Diarrhea and enteritis, 2 years and over -----	30	9.7	6.2
Other diseases of digestive system -----	167	54.2	61.9
Bright's disease and nephritis -----	182	59.1	52.6
Childbirth -----	34	11.0	8.4
Diseases of early infancy -----	112	36.4	31.1
Suicide -----	63	20.5	20.8
Other violence -----	222	72.1	64.7
All other causes -----	138	44.8	48.5

In February there were 544 deaths, or 17.7 per cent of all, from diseases of the circulatory system, and 489, or 15.9 per cent, from various forms of tuberculosis. Heart disease thus led tuberculosis considerably.

Other notable causes of death were: Diseases of the respiratory system, 415; violence, 285; diseases of nervous system, 259; diseases of digestive system, 252; Bright's disease and nephritis, 182; cancer, 169, and epidemic diseases, 86.

The deaths from epidemic diseases were as follows: Typhoid fever, 18; measles, 16; diphtheria and croup, 15; influenza, 10, and all other epidemic diseases, 27.

The deaths from the three leading epidemic diseases reported for the month were distributed by counties as follows:

TYPHOID FEVER.		MEASLES.		DIPHTHERIA AND CROUP.	
Contra Costa -----	1	Nevada -----	1	Alameda -----	4
Fresno -----	1	Sacramento -----	3	Fresno -----	1
Lake -----	2	San Francisco -----	11	Los Angeles -----	4
Los Angeles -----	3	Santa Clara -----	1	Mendocino -----	1
Riverside -----	1			San Bernardino -----	1
San Bernardino -----	1	Total -----	16	San Francisco -----	3
San Diego -----	1			Tulare -----	1
San Francisco -----	5				
San Joaquin -----	2			Total -----	15
Stanislaus -----	1				
Total -----	18				

Geographic Divisions.—The following table presents data for geographic divisions, including the metropolitan area, or San Francisco and the other bay counties (Alameda, Contra Costa, Marin, and San Mateo), in comparison with the rural counties of Northern and Central California:

Deaths from Main Classes of Diseases, for Geographic Divisions: February.

Geographic divisions.	Deaths: February.										
	All causes	Epidemic diseases	Tuberculosis (all forms)	Cancer	Diseases of nervous system	Diseases of circulatory system	Diseases of respiratory system	Diseases of digestive system	Bright's disease and nephritis	Violence	All other causes
THE STATE -----	3,080	86	489	169	259	544	415	252	182	285	399
Northern California -----	333	9	46	12	45	59	36	23	19	36	48
Coast counties -----	194	5	24	8	36	36	24	11	8	22	20
Interior counties -----	139	4	22	4	9	23	12	12	11	14	28
Central California -----	1,656	52	247	85	117	319	241	141	92	150	212
San Francisco -----	614	23	91	37	35	128	81	61	38	53	67
Other bay counties -----	360	9	54	17	34	69	50	24	16	34	53
Coast counties -----	201	3	25	7	19	41	34	16	8	18	30
Interior counties -----	481	17	77	24	29	81	76	40	30	45	62
Southern California -----	1,091	25	196	72	97	166	138	88	71	99	139
Los Angeles -----	755	18	128	51	62	111	98	62	52	73	100
Other counties -----	336	7	68	21	35	55	40	26	19	26	39
Northern and Central California -----	1,989	61	293	97	162	378	277	164	111	186	260
Metropolitan area -----	974	32	145	54	69	197	131	85	54	87	120
Rural counties -----	1,015	29	148	43	93	181	146	79	57	99	140

Sex and Age Periods.—The proportion of the sexes among the 3,080 decedents in February was: Male, 1,916 or 62.2 per cent, and female, 1,164, or 37.8 per cent.

The following table shows the age distribution by numbers and per cents, of deaths classified by sex:

Deaths Classified by Sex and Age Periods, with Per Cents by Age Periods, for California: February.

Age period.	Deaths.			Per cent.		
	Total	Male.	Female.	Total	Male.	Female.
ALL AGES -----	3,080	1,916	1,164	100.0	100.0	100.0
Under 1 year -----	324	181	143	10.5	9.4	12.3
1 to 4 years -----	144	81	63	4.7	4.2	5.4
5 to 14 years -----	80	42	38	2.6	2.2	3.3
15 to 24 years -----	178	97	81	5.8	5.1	6.9
25 to 34 years -----	297	184	113	9.6	9.6	9.7
35 to 44 years -----	311	210	101	10.1	11.0	8.7
45 to 54 years -----	361	254	107	11.7	13.2	9.2
55 to 64 years -----	424	277	147	13.8	14.5	12.6
65 years and over -----	961	590	371	31.2	30.8	31.9

This table shows that relatively more females than males died at under 1 year, 1 to 4 years, 5 to 14 years, 15 to 24 years, and at 65 years

and over. The per cents were substantially the same for men and women dying between 25 and 34 years of age, but in the age periods from 35 to 64 there were relatively more deaths among men than among women. Thus, generally speaking, death comes to men mainly during years of active mature life, but takes women, especially in infancy, childhood, and youth, as well as at the other extreme of life, the period of old age.

Occupations.—The table below gives, for deaths 15 years and over, the number of men and women for whom some occupation was reported in contrast with those for whom no gainful occupation was shown:

Deaths, Fifteen Years and Over, Classified by Sex and Occupation, with Per Cents by Sex, for California: February.

	Deaths.			Per cent male.	Per cent female.
	Total.	Male.	Female.		
15 YEARS AND OVER-----	2,532	1,612	920	63.7	36.3
Occupation reported -----	1,460	1,378	82	94.4	5.6
No gainful occupation-----	1,072	234	838	21.8	78.2

Of the 1,460 decedents for whom occupations were reported the males numbered 1,378, or 94.4 per cent, and the females only 82, or 5.6 per cent.

The following table shows the distribution of male decedents 15 years and over, engaged in the main kinds of occupation:

Deaths of Males, Fifteen Years and Over, Engaged in Gainful Occupations, Classified by Kinds of Occupation, with Per Cents, for California: February.

Kind of occupation.	Males 15 years and over.	
	Deaths.	Per cent.
ALL OCCUPATIONS -----	1,378	100.0
Professional -----	76	5.5
Clerical and official-----	93	6.7
Mercantile and trading-----	113	8.2
Public entertainment -----	30	2.2
Personal service, police and military-----	41	3.0
Laboring and servant-----	270	19.6
Manufacturing and mechanical industry-----	285	20.7
Agriculture, transportation and other outdoor-----	458	33.2
All other occupations-----	12	0.9

Of the 1,378 male decedents for whom occupations were reported 458, or 33.2 per cent, were engaged in agriculture, transportation, and other outdoor pursuits; 285, or 20.7 per cent, in manufacturing and mechanical industry; 270, or 19.6 per cent, in laboring and servant

work; and altogether 365, or 26.5 per cent, in professional, clerical and official, mercantile and trading, and all other occupations.

Morbidity Report for February, 1912.

Disease.	Cases.	Places.
Smallpox -----	99	24
Diphtheria -----	137	32
Measles -----	1,451	37
Typhoid fever -----	44	12
Scarlet fever -----	164	35
Chickenpox -----	122	15
Mumps -----	89	11
Pneumonia -----	101	15
Trachoma -----	6	3
Gonorrhoea -----	15	8
Syphilis -----	8	4
Tuberculosis -----	260	21
Tonsilitis -----	5	2
Rabies -----	2	2
Whooping-cough -----	54	3
Cerebro-spinal meningitis -----	9	5
German measles -----	5	2
Lead poisoning -----	1	1
Erysipelas -----	28	4
Influenza -----	2	1
Ringworm -----	2	1
Malaria -----	3	1
Hookworm -----	3	1
Glanders -----	2	1
Total -----	2,612	241

Morbidity Report for March, 1912.

Disease.	Cases.	Places.
Smallpox -----	66	28
Diphtheria -----	164	42
Scarlet fever -----	77	32
Measles -----	1,356	53
Whooping-cough -----	78	12
Influenza -----	48	3
Mumps -----	204	18
Syphilis -----	1	1
Gonorrhoea -----	5	4
Tuberculosis -----	250	25
Chickenpox -----	143	23
Typhoid fever -----	65	23
Pneumonia -----	88	16
Hookworm -----	19	2
Tonsilitis -----	68	4
Erysipelas -----	27	7
Croup -----	14	3
Ringworm -----	2	2
Glanders -----	1	1
Malaria -----	13	3
Trachoma -----	4	3
Epidemic cerebro-spinal meningitis -----	1	1
Meningitis -----	4	4
Anthrax -----	1	1
Conjunctivitis -----	3	1
Poliomyelitis -----	2	2
Rabies -----	2	1
Tetanus -----	1	1
Amebiasis -----	1	1
Rotheln -----	3	2
Total -----	2,711	319

REPORT OF BUREAU OF HYGIENIC LABORATORY FOR FEBRUARY.

WILBUR A. SAWYER, M.D., Director.

A rapid increase of rabies among the dogs of San Francisco has occurred during the month of February. A considerable number of people have been bitten and the majority are now undergoing the Pasteur treatment. In order to protect those who are financially unable to secure treatment, the State Hygienic Laboratory is issuing the free government virus for administration by the City Bacteriologist of San Francisco and the physician in charge of the laboratory of the Letterman General Hospital at the Presidio. Through this means the State Board of Health hopes to prevent human deaths from occurring. Nine persons from San Francisco are now under treatment with government virus.

Summary of Examinations Made in the California State Hygienic Laboratory During the Month of February, 1912.

Condition suspected.	Positive.	Negative.	Inconclusive.	Total.
Main Laboratory at Berkeley:				
Diphtheria -----	26	59	1	86
Gonococcus infection -----	2	1		3
Hookworm -----		2		2
Malaria -----	2	5		7
Rabies -----	16	3	1	20
Tuberculosis -----	11	23	2	36
Typhoid -----	5	21	1	27
Water -----	7	3	2	12
Miscellaneous -----	1	1		2
				195
San Joaquin Valley Branch:				
Diphtheria -----	8	12	1	21
Gonococcus infection -----	2			2
Tuberculosis -----		4		4
Typhoid -----		1		1
				28
Southern Branch:				
Diphtheria -----	6	13		19
Typhoid -----	1			1
				20
Total number of examinations -----				243

Pasteur Treatment for the Prevention of Rabies by the State Hygienic Laboratory During the Month of February, 1912.

	Treatment commenced.	Treatment completed.
Main Laboratory at Berkeley -----	0	0
San Joaquin Valley Branch at Fresno -----	3	1
Southern Branch at Los Angeles -----	2	2
Laboratory of Sacramento Board of Health, by deputized bacteriologist -----	0	0
Laboratory of San Francisco Board of Health, by deputized bacteriologist -----	7	0
Laboratory of Los Angeles Board of Health, by deputized bacteriologist -----	0	0
Laboratory of Letterman General Hospital, Presidio, by deputized bacteriologist -----	2	1
	14	4

Participation in Instruction in Public Health during February, 1912.

Main Laboratory at Berkeley:

Bacteriological instruction outfits sent out.....	5
Bacteriological instruction outfits in use.....	23
Exhibits loaned for hygienic museum in use.....	1
Number of models or other pieces of apparatus in above exhibits..	6
Talks by Director	2

Epidemiological Investigations during February, 1912.

Main Laboratory at Berkeley:

Field investigations by the Director.....	2
---	---

Continuation of investigation of typhoid cases developing on the steamer "Acme."
Investigation of epidemic of rabies in San Francisco.

REPORT OF BUREAU OF HYGIENIC LABORATORY FOR MARCH.**A Typhoid Carrier on Shipboard.**

On March 19, 1912, an epidemiological investigation of typhoid fever among sailors was completed by the Hygienic Laboratory with the proof that 27 cases of typhoid and four deaths were traceable to a typhoid carrier on board a steam schooner which carried lumber from Eureka to San Francisco. Twenty-six of the cases came, during three and one half years, from the crew of this one ship, which carried only twenty-one men. The carrier was a member of the crew and had had typhoid four years before. He was still discharging virulent bacilli in his excreta. The Secretary and Executive Officer of the State Board of Health have placed the carrier under quarantine. He is voluntarily undergoing treatment for the condition which has resulted in sickness and death among his shipmates.

Cases of Hydrophobia.

During the month of March portions of brain tissue from two men dying in San Francisco with symptoms of hydrophobia (rabies) were examined at the laboratory. In both cases Negri bodies were found in the ganglion cells of the hippocampus. In one case animals which were inoculated with the tissue developed rabies, in the other case inoculation tests were impossible because the tissue had been sterilized by an embalming process. The tests showed conclusively that the fatal disease was rabies. Both these men were victims of the present epizootic of rabies in San Francisco. Both had been bitten by rabid dogs, one while trying to treat his dying dog, and the other while on the street.

A New Branch Laboratory.

On March 1, 1912, the Northern Branch of the State Hygienic Laboratory was established by the State Board of Health. It will be located in the Inverness Building in Sacramento and will be under the charge of Dr. F. F. Gundrum. Routine examinations for diphtheria, tuberculosis, and typhoid fever will be made at this branch for the northern counties, excepting the coast counties.

Stations for the Administration of the Pasteur Treatment for the Prevention of Rabies.

On March 1, 1912, the State Board of Health increased the number of stations at which the free government anti-rabic virus is administered

to those unable to pay for it. The list of stations now stands as follows: The Main Laboratory at Berkeley (Dr. W. A. Sawyer), the San Joaquin Valley Branch (Dr. W. W. Cross), the Southern California Branch (Dr. S. P. Black), the Northern California Branch (Dr. F. F. Gundrum), the City Health Department of San Francisco (Dr. W. H. Kellogg), the City Health Department of Los Angeles (Dr. R. B. Durfee), the City Health Department of Sacramento (Dr. E. S. Loizeaux).

Summary of Examinations Made in the California State Hygienic Laboratory During the Month of March, 1912.

Condition suspected.	Positive.	Negative.	Inconclusive.	Total.
Main Laboratory at Berkeley:				
Anthrax -----	1	1	-----	2
Diphtheria -----	41	59	-----	100
Gonococcus infection -----	1	-----	1	2
Malaria -----	1	5	-----	6
Rabies -----	10	7	-----	17
Tuberculosis -----	12	27	-----	39
Typhoid -----	4	36	6	46
Water -----	-----	1	-----	1
Miscellaneous -----	-----	6	1	7
				220
San Joaquin Valley Branch:				
Diphtheria -----	2	11	-----	13
Gonococcus infection -----	-----	1	-----	1
Malaria -----	-----	1	-----	1
Tuberculosis -----	-----	1	-----	1
Typhoid -----	1	2	-----	3
				19
Southern Branch:				
Diphtheria -----	7	19	1	27
Typhoid -----	-----	2	-----	2
				29
Northern Branch at Sacramento:				
Established during March. No examinations.				
Total number of examinations -----	-----	-----	-----	268

Pasteur Treatment for the Prevention of Rabies by the State Hygienic Laboratory During the Month of March, 1912.

	Treatment commenced.	Treatment completed.
Main Laboratory at Berkeley-----	0	0
Northern Branch at Sacramento-----	0	0
San Joaquin Valley Branch at Fresno-----	2	2
Southern Branch at Los Angeles-----	0	1
Laboratory of Sacramento Board of Health, by deputized bacteriologist -----	0	0
Laboratory of San Francisco Board of Health, by deputized bacteriologist -----	9	10
Laboratory of Los Angeles Board of Health, by deputized bacteriologist -----	2	0
Laboratory of Letterman General Hospital, Presidio, by deputized bacteriologist -----	2	2
	15	15

Participation in instruction in public health during February, 1912.

Main Laboratory at Berkeley:

Bacteriological instruction outfits sent out.....	6
Bacteriological instruction outfits in use	28
Exhibits loaned from Hygienic Museum, sent out.....	1
Number of models in above exhibit.....	3
Exhibits loaned from Hygienic Museum in use.....	1
Number of models or other pieces of apparatus in above exhibits....	6
Talks by Director.....	1

Epidemiological investigations during March, 1912.

Main Laboratory at Berkeley:

Field investigations by the Director.....	3
Completion of investigation of typhoid cases developing on the steamer "Acme," and detection of a typhoid "carrier" on board this ship.	
Investigation of a case of human rabies dying in San Francisco on March 9, 1912.	
Investigation of a case of human rabies dying in San Francisco on March 21, 1912.	

REPORT OF PURE FOOD AND DRUG LABORATORY FOR MARCH.

PROFESSOR M. E. JAFFA, Director.

The following food and drug cases were referred to the district attorneys of San Francisco, Los Angeles, and Oakland at the meeting of the Board held April 6, 1912:

No food or drug hearings were held during the month of March. The next hearings have been set for May 4, 1912.

During the summer the Bureau will continue its survey of counties with a view to making a progress report to the Legislature on the actual results of operating the pure food and drug acts in California for five years. There is no doubt that a great deal of good has resulted, but the small number of inspectors available has prevented any rapid changes.

The Board, at a recent meeting, adopted a policy of appointing "witness-deputies" in cities and towns having sanitary inspectors but having no special food ordinances or food inspectors. These witness-deputies are paid by the cities concerned, but work under the direction of the state food inspectors. It is believed that this arrangement will enable the Board to keep a much larger area under constant supervision. It will also insure uniformity of administration of food and drug control, which is a matter of vital importance to the wholesale merchants and all those engaged in interstate or intercounty business.

Food and Drug Cases Ordered Referred to District Attorneys April 6, 1912.

Name of article.	Offense.	Manufacturer or jobber.	Accused dealer.	Locality.
Banana syrup -----	Mislabeled. Contains coal-tar color not declared.	-----	John Cocores -----	Los Angeles
Banana syrup -----	Mislabeled. Contains coal-tar color not declared.	-----	J. W. Fisher -----	Los Angeles
Banana syrup -----	Mislabeled. Contains coal-tar color not declared.	-----	T. Curly -----	Los Angeles
Pineapple syrup -----	Mislabeled. Contains benzoates not declared.	-----	J. A. Harris -----	Los Angeles
Whisky -----	Adulterated. Below standard. Other materials have been substituted for alcohol.	Shanklin & Martell, Los Angeles.	Shanklin & Martell -----	Los Angeles
Frankfurter sausage	Mislabeled. Contains cereal not declared.	-----	A. J. Rosenberg -----	San Francisco
Frankfurter sausage	Mislabeled. Contains cereal not declared.	-----	A. J. Rosenberg -----	San Francisco
Milk -----	Adulterated. Below standard in fat and solids not fat.	-----	A. R. Kirk -----	Oakland
	Mislabeled. False and misleading statements.	-----		
Milk -----	Adulterated. Below standard in fat and solids not fat.	-----	John Bemis -----	Oakland
	Mislabeled. False and misleading statements.	-----		
Milk -----	Adulterated. Below standard in fat and solids not fat.	-----	Eureka Restaurant -----	Oakland
	Mislabeled. False and misleading statements.	-----		

REPORT OF BUREAU OF PUBLICATIONS AND HEALTH INFORMATION.

G. P. JONES, Acting Director.

Public interest in health matters continued during February and March as indicated by the many requests for printed information regarding disease prevention and general health conditions. Some of the latter requests are from intending settlers in other states who ask concerning health conditions in particular localities, which goes to show that a sanitary city is the best sort of advertisement. Many requests for information regarding methods for destroying the house fly and mosquito came with the approach of the spring months. The Bureau still has a limited number of the May, 1910, Bulletin which deals with the extermination of flies.

The following lectures were delivered by members of the staff:

February 13th, at El Cajon, "Pure Food and Drugs," by Professor M. E. Jaffa.

February 14th, at San Diego, "Pure Food and Drugs," by Professor M. E. Jaffa.

February 15th, at Lemon Grove, "Pure Food and Drugs," by Professor M. E. Jaffa.

March 8th, at Los Angeles, Pure Food and Drugs, by Professor M. E. Jaffa.

March 8th, at Los Angeles, "Pure Food and Drugs," by Professor Auxiliary, "Pure Food Laws—Ancient and Modern," by Professor M. E. Jaffa.

March 19th, at Mills College, "Public Health Service," by Dr. Wm. F. Snow.

March 21st, at the University of California, "Vocational Opportunities for Women," by Dr. Wm. F. Snow.

March 26th, at the League of the Republic meeting, University of California, "State Health Administration," by Dr. Wm. F. Snow.

March 28th, at the University of California, before the class in Sanitary Organization and Vital Statistics, "The Bureau of the Hygienic Laboratory and Its Work," by Dr. W. A. Sawyer.

During the next six months there will occur a number of notable meetings and popular exhibits along lines of health conservation. In May and June there will be held in Washington and Atlantic City a series of Conferences on Tuberculosis, Occupation Diseases, the Control of Venereal Diseases, etc., and the American Climatological Association will meet in Hartford. The Surgeon General's Conference with State Health Officials also convenes June 1st in Washington. This conference is of great value in promoting uniformity of health administration throughout the United States.

Of special importance to California will be the Summer School session of the University of California. The playground courses of instruction, the physical training and domestic science courses, and the public health courses are of the greatest value in promoting the health conservation movement. Lack of space prevents the publication in this issue of an excellent article on these courses written by Secretary Victor Henderson

of the University Board of Regents, but full descriptions can be obtained by writing to the Registrar of the University, Berkeley.

The annual national municipal convention, which will be held in Los Angeles in July, will be accompanied by a most instructive exhibit, which will devote space to housing conditions, garbage, sewage, parks, tuberculosis playgrounds, and many other phases of health problems.

In September the California League of Municipalities and the State Conference of Health Officers will meet in Berkeley. Here, also, a most instructive and practical health exhibit will be held.

In Washington, September 23d to 28th, there will be an exhibit on all the phases of preventive medicine. The Fifteenth International Congress on Hygiene and Demography will be one of the most significant and stimulating health conservation gatherings ever held. The scientific program will be participated in by the most famous scientists of the world. The exhibit will cover every phase of sanitation, prevention of accidents, personal care of health, etc. After this meeting it is expected that this exhibit will be kept intact and transferred from one great city to another throughout the United States. It is to be hoped this exhibit can be brought to San Francisco in 1915.

All persons interested in this congress should either attend or take out a membership in order to receive a printed copy of the proceedings and scientific papers. The membership fee is five dollars. The State Board of Health has literature describing this congress, which will be sent out on request.

The Governor of California has accepted the invitation of the United States Government to participate, and has appointed a committee to coöperate with the cities in planning any exhibits. This committee consists of the following:

1. Honorable Curtis H. Lindley-----San Francisco
Representing the Panama-Pacific Exposition.
2. Secretary Frank Wiggins-----Los Angeles
Representing Southern California Chambers of Commerce.
3. Doctor George C. Pardee-----Oakland
Representing the State Conservation Commission.
4. Doctor Thomas W. Huntington-----San Francisco
Representing the Medical Profession of California.
5. Doctor William F. Snow, California State Board of Health-----Sacramento
Representing the Governor of California.

The following open letter has been sent out by the California members of the directors of this congress.

The people of the Pacific slope will look forward with extraordinary interest to the forthcoming International Congress on Hygiene and Demography, and the exhibition to be held under the auspices of the Federal Government.

Our world relations will be greatly expanded with the opening of the Panama canal, and we must answer the *world's inquiry* as to our efficiency in these expanded relations. In such an inquiry, the status of our sanitary institutions and administration will be a dominant element, quite as the question of health defense dominates the canal enterprise. The International Congress will bring to this country hundreds of eminent foreigners whose opinion will prevail in forming the world's judgment of our national and local efficiency in matters of public health. From the viewpoint of authoritative opinion, those who will attend the congress at Washington, in 1912, are more important to us than the greater numbers who will attend the Panama-Pacific Exposition in 1915. We are offered in the congress of 1912 a splendid opportunity to become well known to hundreds of foreign experts who will carry back to their countries the impressions which they will have received two years ahead of the opening of the canal.

The opportunity is no less valuable from the viewpoint of public opinion in our sister states. Hitherto, we have had no real chance to show the quality of our sanitary undertakings and achievements. An exceptional chance is offered at Washington in 1912. Forty-odd states have already accepted the official invitation, so that it is impossible to doubt the sufficiency of our opportunity. An unequivocal response should come from California, Oregon, and Washington. It should be made clear that private citizens and public officials alike are sensible of present opportunities and of coming responsibilities. This letter is addressed to those who can greatly strengthen this movement by becoming active members of the congress, and by publicly encouraging the official participation by the State and municipal governments.

DR. NORMAN BRIDGE, Los Angeles.
DR. ELMER E. HEG, Seattle.
DR. HERBERT C. MOFFITT, San Francisco.
DR. WM. OPHULS, San Francisco.
DR. ANDREW C. SMITH, Portland.
DR. WM. F. SNOW, Sacramento.

LIST OF COUNTY HEALTH OFFICERS.

County.	Health officer.	Address.
Alameda	Dr. C. L. McKown	Niles
Alpine*	County Recorder Frank Smith	Markleeville
Amador	Dr. E. E. Endicott	Jackson
Butte	Dr. L. Q. Thompson	Gridley
Calaveras	Dr. Irwin B. March	San Andreas
Colusa	Dr. C. A. Poage	Colusa
Contra Costa	Dr. F. S. Gregory	Pittsburg
Del Norte	Dr. E. M. Fine	Crescent City
El Dorado	Dr. L. M. Leisenring	Placerville
Fresno	Dr. W. T. Burks	Fresno
Glenn	Dr. J. A. Randolph	Willows
Humboldt	Dr. E. H. Bryant	Eureka
Imperial	Dr. Virgil McCoombs	El Centro
Inyo	Dr. I. J. Woodin	Independence
Kern	Dr. G. M. Bumgarner	Bakersfield
Kings	Dr. Ralph Motherol	Hanford
Lake	Dr. W. E. Upton	Kelseyville
Lassen	Dr. W. E. Dozier	Susanville
Los Angeles	Dr. E. O. Sawyer	Los Angeles
Madera	Dr. Mary R. Butin	Madera
Marin	Dr. J. H. Kuser	Novato
Mariposa	Dr. F. L. Wright	Mariposa
Mendocino	Dr. J. Liftchild	Ukiah
Merced	Dr. C. H. Castle	Merced
Modoc	Dr. John Stile	Alturas
Mono*	County Recorder Geo. Delury	Bridgeport
Monterey	Dr. Garth Parker	Salinas
Napa	Dr. E. Z. Hennessey	Napa
Nevada	Dr. Carl P. Jones	Grass Valley
Orange	Dr. John Wehrly	Santa Ana
Placer	Dr. O. L. Barton	Loomis
Plumas	Dr. F. D. Walsh	Quincy
Sacramento	Dr. George E. Tucker	Riverside
San Benito	Dr. Hugh Beattie	Elk Grove
San Bernardino	Dr. J. M. O'Donnell	Hollister
San Diego	Dr. Philip M. Savage	San Bernardino
San Francisco	Dr. Nathan Hunt	San Diego
San Joaquin	Dr. R. G. Brodrick	San Francisco
San Luis Obispo	Dr. R. B. Knight	Stockton
San Mateo	Dr. H. M. Cox	San Luis Obispo
Santa Barbara	Dr. W. G. Beattie	Colma
Santa Clara	Dr. J. C. Bainbridge	Santa Barbara
Santa Cruz*	Dr. William Simpson	San Jose
Shasta		Santa Cruz
Sierra	Dr. F. Stabel	Redding
Siskiyou	Dr. R. B. Davy	Downieville
Solano	Dr. F. J. McNulty	Yreka
Sonoma	Dr. S. G. Bransford	Suisun
Stanislaus	Dr. P. A. Meneray	Santa Rosa
Sutter	Dr. F. R. De Lappe	Modesto
Tuolumne	Dr. J. McFadyen	Yuba City
Ventura	Dr. J. S. Cameron	Red Bluff
Yolo	Dr. D. B. Fields	Weaverville
Yuba	Dr. W. A. Preston	Visalia
Tehama	Dr. Wm. Lyman Hood	Sonora
Trinity	Dr. A. A. Maulhardt	Oxnard
Tulare	Dr. W. J. Blevins	Woodland
Tulare	Dr. J. H. Barr	Marysville

*This county has not been able to arrange with any physician to act as health officer.

LIST OF CITY HEALTH OFFICERS.

City.	Health officer.
Alameda	Dr. A. Hieronymus
Albany	Dr. Robt. Hector
Alhambra	Dr. F. E. Corey
Alturas	Dr. John Stile
Alviso	
Anaheim	Dr. J. L. Beebe
Antioch	Dr. W. S. George
Arcadia	
Arcata	Dr. G. W. McKinnon
Arroyo Grande	
Auburn	Jas. H. Breslin
Azusa	Dr. L. W. Atkinson
Bakersfield	S. D. Mullins
Belvedere	Dr. Florence Scott
Benicia	Dr. W. L. McFarland
Berkeley	Dr. J. J. Benton
Biggs	Dr. B. Caldwell
Bishop	Dr. J. W. Shute
Blue Lake	Dr. G. N. Wood
Brawley	Dr. L. L. Lindsey
Burbank	
Burlingame	
Calistoga	
Calexico	Dr. Wm. F. Smith
Chico	G. H. Taylor
Chino	Dr. John W. Callnon
Claremont	
Cloverdale	F. P. Conner
Coalinga	Dr. H. S. Warren
Colfax	Silas Ulery
Colton	Dr. L. A. J. La Motte
Colusa	Dr. C. A. Poage
Compton	J. W. Stone
Concord	Dr. F. F. Neff
Coram	Geo. H. Thomas
Corning	Dr. W. F. Maggard
Corona	Dr. W. H. Chapman
Coronado	Dr. Raffaele Lorini
Cottonwood	Dr. A. B. Gilliland
Covina	
Crescent City	
Daly City	
Davis	Dr. W. E. Bates
Delano	Dr. H. Hildreth
Dinuba	Dr. Wm. Whittington
Dorris	Dr. A. A. Atkinson
Dixon	W. C. Rhem
Dunsmuir	Dr. W. B. Mason
Eagle Rock	Dr. C. H. Phinney
Elsinore	Dr. Hugh Walker
Emeryville	Dr. A. T. Drennan
Escondido	Dr. David Crise
Etna Mills	Dr. W. H. Haines
Eureka	Dr. L. A. Wing
Exeter	Dr. A. D. McLean
Fairfield	Dr. S. G. Bransford
Ferndale	Dr. C. A. Phelan
Fort Bragg	Dr. L. C. Gregory
Fort Jones	Thos. Bransom
Fortuna	Dr. Geo. S. Loveren
Fowler	Dr. W. T. Crawford
Fresno	Dr. Geo. H. Aiken
Fullerton	Dr. F. J. Gobar
Gilroy	Dr. John A. Clark
Glendale	Dr. R. E. Chase
Grass Valley	Paul E. Sears
Gridley	Dr. L. L. Thompson
Hanford	Dr. R. W. Musgrave
Hayward	Dr. G. E. Reynolds
Healdsburg	Dr. J. W. Seawell
Hemet	Dr. A. B. Eadie
Hermosa Beach	G. A. Cleaveland
Hercules	Dr. M. L. Fernandez
Hillsborough	
Hollister	Dr. R. G. Curtis
Hollywood	E. O. Palmer
Huntington Beach	Dr. G. A. Shank
Huntington Park	Dr. W. Thompson
Imperial	Dr. C. E. Standlee

City.	Health officer.
Inglewood	Dr. H. A. Putnam
Jackson	F. V. Sanguinetti
Kennett	Dr. J. P. Sandholdt
Kernville	
King City	
Kingsburg	
Lakeport	Jabez Banks
Larkspur	
Lincoln	F. R. Elder
Lindsay	Dr. W. W. Tourtillot
Livermore	Dr. H. G. McGill
Lodi	Dr. F. W. Colman
Long Beach	Dr. W. H. Newman
Lompoc	
Lordsburg	Dr. J. E. Hubble
Los Angeles	Dr. L. M. Powers
Los Banos	Dr. J. L. McClelland
Los Gatos	Dr. C. K. Small
Loyalton	Dr. G. L. Coates
Madera	Dr. Mary R. Butin
Maricopa	Dr. H. N. Taylor
Martinez	Dr. E. E. Brown
Marysville	Wm. Meek
Mayfield	Dr. F. M. Seibert
McCloud	Dr. R. T. Legge
McKittrick	G. M. Chitwood
Merced	Dr. C. H. Castle
Mill Valley	Capt. M. Staples
Modesto	Dr. J. J. Knowlton
Montague	
Mojave	A. Smith
Monrovia	Dr. R. D. Adams
Monterey	Edward Allen
Morgan Hill	Dr. D. W. Watt
Mountain View	Dr. A. H. McFarlane
Napa	J. D. Treadway
National City	Dr. T. F. Johnson
Nevada City	Hugh Murchie
Newman	Dr. H. V. Armistead
Newport Beach	
Oakdale	Elmer E. Endicott
Oakland	Dr. E. N. Ewer
Ocean Side	Dr. R. S. Reid
Ocean Park	Dr. W. M. Kendall
Ontario	Dr. C. S. Orr
Orange	Dr. F. L. Champline
Orland	Dr. S. Goldman
Oroville	Dr. W. F. Gates
Oxnard	Dr. Ralph W. Avery
Pacific Grove	Dr. W. V. Grimes
Palo Alto	Hubert O. Jenkins
Pasadena	Dr. Stanley P. Black
Paso Robles	B. B. Pierce
Perris	A. F. Hardy
Petaluma	Dr. J. M. Proctor
Pinole	J. Chattleton
Pittsburg	Dr. F. S. Gregory
Placerville	P. J. Hall
Pleasanton	Dr. S. J. Wells
Pomona	Dr. T. J. Wilson
Porterville	Dr. O. C. Higgins
Piedmont	Geo. T. Burtchael
Point Arena	
Potter Valley	
Randsburg	E. B. McGinnes
Red Bluff	Dr. F. J. Bailey
Redding	L. D. Poole
Redlands	Dr. Chas. E. Ide
Redondo Beach	Dr. D. R. Hancock
Redwood City	Dr. J. L. Ross
Richmond	Dr. Chas. R. Blake
Rio Vista	Dr. A. J. McKinnon
Riverside	Dr. Thos. R. Griffith
Rocklin	Dr. S. P. Rugg
Roseville	Dr. R. H. Ashby
Ross	
Sacramento	Dr. Wm. K. Lindsay
Saint Helena	G. B. Anderson
Salinas	S. A. McCollum

LIST OF CITY HEALTH OFFICERS—Continued.

City.	Health officer.	City.	Health officer.
San Anselmo.....	Dr. Chipman	Stockton.....	Dr. R. T. McGurk
San Bernardino.....	Dr. C. V. McConnico	Susanville.....	Dr. E. S. Drucks
San Diego.....	Dr. F. H. Mead	Suisun.....	_____
San Francisco.....	Dr. R. G. Brodrick	Stanton.....	_____
Sanger.....	Dr. T. F. Madden	Sonoma.....	_____
San Jose.....	Dr. M. F. Hopkins	Taft.....	E. G. Wood
San Jacinto.....	Thos. Lloyd	Tehachapi.....	R. M. Spencer
San Juan.....	Henry Drake	Tracy.....	Dr. J. G. Murrell
San Luis Obispo.....	Dr. P. L. Rookledge	Tehama.....	_____
San Rafael.....	Dr. W. F. Jones	Tropico.....	_____
San Mateo.....	Dr. S. G. Goodspeed	Tulare.....	Dr. J. B. Rosson
San Leandro.....	P. C. Du Bois	Turlock.....	Dr. E. L. Clough
Santa Ana.....	Dr. J. I. Clark	Ukiah.....	Dr. J. Liftchild
Santa Barbara.....	Dr. D. A. Conrad	Upland.....	W. C. Redman
Santa Cruz.....	Dr. H. E. Piper	Vacaville.....	Dr. A. P. Finan
Santa Clara.....	Dr. J. F. Beattie	Vallejo.....	Dr. E. A. Peterson
Santa Monica.....	Dr. W. H. Parker	Ventura.....	J. H. Hardey
Santa Paula.....	Dr. B. E. Murriel	Visalia.....	Dr. A. W. Preston
Santa Rosa.....	Dr. Jackson Temple	Watsonville.....	Dr. F. H. Koepke
Santa Maria.....	Dr. O. P. Paulding	Watts.....	Dr. E. J. Richie
Sausalito.....	Dr. A. H. Mays	Wheatland.....	Dr. A. W. Foshay
Sawtelle.....	Dr. A. B. Hromadka	Whittier.....	Dr. W. H. Stokes
Selma.....	Dr. F. H. Williams	Willits.....	Dr. W. L. Blodgett
Sierra Madre.....	Dr. R. H. Mackerras	Willows.....	Thos. Kinkade
Sebastopol.....	Dr. J. J. Keating	Winters.....	Dr. J. H. Haile
Sisson.....	_____	Woodland.....	Peter Scott
South Pasadena.....	Dr. C. A. Whiting	Yreka.....	W. D. Doggett
South San Francisco.....	Dr. H. G. Plymire	Yuba City.....	_____

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